

REMARKS

I. STATUS OF THE CLAIMS AND THE OFFICE ACTION REJECTIONS

The present application originally included claims 1-20. The Office Action correctly indicates that claims 6-11 and 14-16 were withdrawn, thereby leaving claims 1-5, 12, 13, and 17-20. Of these remaining claims, the Office Action identifies a number of objections to claims 12, 17, 19, and 20. For the most part, this amendment amends these claims in the manner suggested in the Office Action, such that these objections should now be moot.

The Office Action includes a rejection under § 112, based on alleged indefiniteness, as to claims 4, 5, and 18. Applicant has amended these claims, and respectfully asserts that these amendments should render moot these § 112 rejections.

Substantively, claims 1 and 2 were rejected for alleged lack of novelty under § 102(b) based on McFadden U.S. Patent No. 5,560,728 (McFadden '728"). Claims 3, 12, and 13 were rejected for alleged obviousness under § 103 based on a combination of McFadden '728 and Riach U.S. Patent No. 5,177,823 ("Riach '823"). Claims 17-20 were rejected for alleged obviousness under § 103 based on a combination of McFadden '728 and Ross U.S. Patent No. 2,320,303 ("Ross '303"). Applicant respectfully traverses each of these three substantive rejections for the reasons explained below, and respectfully requests reconsideration.

II. MCFADDEN '728 DOES NOT ANTICIPATE EITHER OF CLAIMS 1 OR 2

Claims 1 and 2 relate to the swivel adapter shown in Figs 1-5. These Figures show this swivel adapter as having a base 60 with an outwardly facing first side 57, and a pivot surface 55 that also extends outwardly. A center adapter 52 mounts for pivoting motion on the pivot surface 55, and has a pair of device connectors 46 and 48 that also face outwardly. A clamp 78

has a clamp operator adapted to clamp the center adapter 52 on the pivot surface 55 at a desired orientation relative to the base 60, or to unclamp the center adapter 52 therefrom, to allow the center adapter 52 to pivot with respect to the pivot surface 55.

In the claims, claim 1 recites only one of the two device connectors 46, 48. Claim 2 specifies that the pivot surface 55 is a cylindrical boss 56 and the center adapter 52 has a split bore (slot 74 in Figs 2 and 3) mountable over the cylindrical boss.

Applicant submitted McFadden '728 to the USPTO via an Information Disclosure Statement. Nonetheless, McFadden '728 clearly does not anticipate either of claims 1 or 2. Among other reasons, McFadden '728 does not disclose a first device connector facing in an outward direction. In fact, it is not entirely clear which direction would be outward in Figure 1 of McFadden '728.

As for claim 2, the so called split bore 36, 46 of McFadden '728 is actually part of what Applicant would refer to as the base unit handle (reference numeral 34 in Fig 1 of the present application). In fact, the clamping mechanisms B1 and B2 of McFadden '728 both appear to be base handle units, not swivel adaptors. It is the clamping arm C1 in McFadden '728 which (merely because of its location next to clamp 11, not because of its structure), would seem to be most closely related to the swivel adapter.

For these reasons, Applicant respectfully requests that the USPTO withdraw the Section 102 rejection based on McFadden '728.

III. CLAIMS 1-5, 12, AND 13 ARE PATENTABLE OVER THE CITED PRIOR ART

A. The Claimed Invention

Claim 3 further describes a swivel adapter as described above with respect to claim 1 and 2. Additionally, claim 3 recites a handle 80, a rocker 96, a rod 85, and biasing means 88. The handle 80 pivotally connects to the center adapter 52 on one side of the split bore 74. The rocker 96 and the rod 85 operatively connect so as to span the split bore 74 and also to define oppositely directed first 95 and second 91 shoulders. The biasing means facilitates movement of the clamp operator from the clamped to the unclamped position.

Claim 12 is analogous to claim 3. It differs from claim 3 in that the preamble expressly refers to a head support, and that the swivel adapter connects thereto and extends outward therefrom. Fig 1 shows the head support 20 connected on one side of the swivel adapter 26 and the device connectors 46 and 48 facing in the outward direction.

Claim 12 also differs from claim 3 in that it does not expressly include any reference to the cylindrical boss.

Claim 13 is similar in many respects to claim 5, a claim that was not substantively rejected in the Office Action.

B. The Cited Prior Art Differs From The Claimed Invention

As described previously, McFadden '728 does not teach the first device connector recited in claim 1. This deficiency alone is sufficient to defeat this asserted rejection.

The Office Action also mischaracterizes McFadden '728 in other ways. For instance, the Office Action asserts that the component B2 of McFadden '728 is the clamp of a swivel adapter. In reality, B2 is a base handle unit that is more analogous to reference number 34 of Fig 1.

Nonetheless, if B2 is considered the clamp of Fig 1, then reference numeral 44 necessarily corresponds to the split bore 74. Yet, in the reworked Figure shown on page 7 of the Office Action, reference letters "A" and "B" are characterized as the first and second shoulders, not a split bore. The problem with this approach, as outlined in the Office Action, is that McFadden '728 does not show a structure with both a split bore and, separate from the split bore, a pair of oppositely directed shoulders.

Thus, even though Riach '823 shows a biasing spring, neither McFadden '728 nor Riach '823 discloses a swivel adapter having a center adapter with a split bore, and a clamp that includes a rod and a rocker that span the split bore and define oppositely directed first and second shoulders. Contrary to the assertion in the Office Action, the reference letters A and B cannot be both the claimed split bore and the claimed shoulders.

These same structural differences also apply with respect to claims 12 and 13.

C. There Is No Objective Reason To Combine The Cited Prior Art To Achieve The claimed Invention

As for claim 3, there is no objective reason to combine McFadden '728 with Riach '823. First of all, there is no teaching, suggestion, or motivation in either reference to make the relied upon combination.

Perhaps even more importantly, because of the structural differences explained above, even an improperly made combination of these references would still be deficient. That is, such a combination would still lack the recited combination of features which includes; a swivel adapter having a center adapter with: a) a first device connector facing in an outward direction; b) a split bore; and c) a clamp with a rocker and a rod that span the split bore and also define oppositely directed first and second shoulders.

For these reasons, the rejection of claim 3 based on a purported combination of McFadden '728 and Riach '823 is improper and should be withdrawn. Still further, each of claims 1-5 should be allowed over this purported combination.

For substantially the same reasons, there is no objective reason to combine McFadden '728 with Riach '823 to achieve the invention as recited in either of claims 12 or 13. Applicant respectfully asserts that this rejection is equally improper as to claims 12 and 13, and requests that it be withdrawn.

IV. CLAIMS 17-20

Applicant respectfully notes that the response to the prior Restriction Requirement elected claims 2-5, 12, and 13 without traverse. Applicant did not elect claims 17-20. Nonetheless, because claims 17-20 are rejected in the Office Action, this response addresses those rejections, and asserts that claims 17-20 (as amended via this amendment) are patentable over the cited prior art.

A. The Claimed Invention

Claim 17 is an independent claim that describes a base handle unit. Claim 18 further describes the linkage recited in claim 17, which is connected between one end of a rod and one end of a closing handle, thereby to provide a mechanical advantage in transferring a force applied thereto.

Claim 19 is an independent apparatus claim that also describes the U-shaped frame, the crossbar, and a transition arm. Generally, it then describes the base unit recited in claim 17.

Independent claim 20 is similar to claim 19 except that it also expressly recites a swivel adapter, similar to claim 1.

B. The Differences Between The Cited Prior Art And The Claimed Invention

For each of claims 17-20, the linkage which provides a mechanical advantage in transferring applied force is a feature that distinguishes over McFadden '728. The desire to supply this mechanical advantage results from the relatively recently developed need to connect more attachments to a patient head support system.

In contrast, McFadden '728 seeks to achieve precise positioning of a patient by using first, second, third, and fourth arms and an extra safety arm 2, which for the most part operates separately from the arms. Thus, McFadden '728 does not try to improve the mechanical advantage of the base handle unit. Instead, McFadden '728 relies on a separate structure to achieve an added degree of safety.

The rejection relies on Ross '303, which issued in 1943 and is directed to a "Mechanic's Tool." It has nothing to do with surgery or patient support.

C. There Is No Objective Reason To Combine The Cited Prior Art References In The Manner Suggested

The Office Action fails to supply any objection reasons as to why someone of ordinary skill in the art would add a linkage to one of the base units of McFadden '728. This rejection is an example of the improper use of hindsight to reconstruct the prior art.

The problem sought to be solved by the present invention was twofold, that of: 1) providing additional device connectors adjacent to a head support, and 2) reinforcing the base unit to better accommodate the extra weight of the structure held by such device connectors.

A person of ordinary skill would not reinforce the mechanical advantage of McFadden '728 by adding the linkage taught by Ross '303. McFadden '728 relies on separate structure for

mechanical reinforcement, not enhanced strengthening of the existing components of the base unit handle.

McFadden '728 seeks to solve a different problem than Applicant. More particularly, McFadden '728 describes the purported problem of accidental unlocking of the support devices during surgery. To prevent this from occurring, McFadden '728 adds a safety device 2, shown in Figs 1 and 2 of McFadden '728. McFadden '728 does not add safety by reinforcing any of clamping mechanisms B1, B2, or B3.

Thus, compared to the claims, McFadden '728 seeks to prevent a different problem, i.e. accidental unlocking, via a different approach, i.e. adding an extra device. In contrast, the claims seek to accommodate the connecting of more surgical hardware by adding connectors and by reinforcing the existing components to support the added weight.

For these reasons, Applicant respectfully asserts that this rejection is improper and requests that it be withdrawn, and these claims allowed.


V. CONCLUSION

For the reasons set forth above, Applicant respectfully asserts that each of claims 1-5, 12, 13, and 17-20 is in condition for allowance and respectfully requests that they be allowed with further delay.

Application No. 10/549,876
Amendment dated May 12, 2008
Reply to Office Action dated February 11, 2008

Applicants believe no additional fees are necessary. Should any additional fees or surcharges be deemed necessary, Examiner has authorization to charge fees or credit any overpayment to Deposit Account No. 23-3000.

Respectfully submitted,


Thomas J. Burger
Reg. No. 32,662

Wood, Herron & Evans, L.L.P.
2700 Carew Tower
441 Vine Street
Cincinnati, OH 45202
(513) 241-2324 (voice)
(513) 241-6234 (facsimile)